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## *RUMMAGINGS IN ETYMOLOGY.*

NOT long ago I heard a man, in describing to a companion a quarrel in which he had been concerned, use the expression: "I gave him a cuff." "Did it have a button in it?" asked his listener. The question set me thinking of the widely different meanings of the word cuff, and made me wonder if there were any connection between them. There is a close one. They are both derived from the Gothic word *kaupatyan*, to strike. A man about to hit another turns back his sleeve from his hand that it may not be in the way. The fold thus formed came in time to have the same name with the action which produced it. The derivation of the word shows that sleeves must have been turned up often, or, in other words, that there must have been much fighting in early days. Speaking of sleeves reminds me that although we use the expression "to laugh in one's sleeve," it has lost much of its significance for us. That part of the garment was formerly large and pendent, and it was an easy thing to conceal a laugh behind it. That could not well be done, as sleeves are worn now.

Pantaloon comes from the Italian word *pantalone*. The Vene-

tians were the first to wear this garment, and they gave to it the name of their ancient patron saint, Pantaleon. The term was applied to them in derision by other nations, as John Bull is to the English, or Uncle Jonathan to us, because of its very general use as a baptismal name. Pantaleon is said to be derived from *pianta leone*, the lion planter, the allusion being to the boasts made by the Venetians. The buffoon in Italian comedy took his name Pantaloon from the garment he wore. In his case the stockings and breeches were in one piece, and were tight-fitting.

Sock is derived from the Latin word *soccus*, a low-heeled shoe worn by ancient comedians. It afterwards came to mean something put between the foot and the shoe. Shoe springs from the same root. Slippers, as is readily seen, take their name from the ease with which they may be slipped on and off.

Stocking owes its origin to the Saxon word *stican*, to stick, because it was made or stuck with sticking needles, now known as knitting needles. From this Saxon word are also derived the various stocks which we know. They are widely divergent in meaning, but possess in common the idea of *fixedness*. Thus men were fastened in the stocks; the stock of a gun is that to which the barrel is secured; the stock of trade is fixed capital; and the same may be said of the stock on a farm, although there the money has taken another form; in the the stocks, funds are firmly invested, and cannot be drawn out until a specified time; the stock of a tree is fixed in the ground. A gentleman's head appearing above the old-fashioned silk stock certainly gives the idea of fixedness. All these words had primarily the idea of being firmly fastened.

The derivations of coat and cap are simple. The former is from an Italian word *cotta*, of the same meaning with coat, and the latter from the Latin *caput*, the head, whence a covering for the head. Shirt comes from the Anglo-Saxon *sceran*, to shear, to cut. Shire, a territorial division, may be referred to the same source. Vest is from the Latin *vestis*, a garment, and waistcoat is plainly a coat reaching to the waist. Glove is derived from *clofen*, an Anglo-Saxon word, signifying to cleave, because gloves are cleaved or cut to fit the fingers. Tippet takes its name from Thibet, whence came the furs of which it

was first made. Cravat probably owes its name to the Croats or Cravates, a sort of German troops who first wore this article of dress and introduced it into Europe in the seventeenth century. By some it is traced to the Gothic words *craw*, the neck, and *wad*, cloth.

Stud is derived from the Anglo-Saxon *studu*, a support. It first meant a prop, then a nail with a large head driven in to hold the beam, then an ornamental nail or knob, and finally an ornamental knob of gold to hold a shirt together.

Pockethandkerchief is plainly a compound of pocket and handkerchief, which is likewise a compound of hand and kerchief. Kerchief is derived from the French words *couvrir*, to cover, and *chef*, the head, indicating that the first use made of this article was to cover the head with it. Later, it was carried in the hand and came to be known as a handkerchief; finally it was carried in the pocket and became a pockethandkerchief.

K.

## *EXPERIENCES OF AN OBJECT LESSON TEACHER.*

AT the close of the winter term, Miss Wise went to a friend who was a naturalist as well as a scholastic gentleman. She told him of her contemplated reform in the matter of object teaching, and said: "I am going to have less of blackboard, and more of eyes, and ears, and fingers. I came to ask you to help me to material for the lessons. You are a botanist and zoölogist."

"I thought your aim was not acquirement, but a training of the faculties for acquiring."

"But I shall need books on natural science for reference, or, what is better, the experience of a naturalist."

"You wish to teach children to use their senses by means of books?—Are you about to use a 'pony' when you will not allow them to do so?"

"I am afraid I must give up my idea," said Miss Wise; "I have used other people's senses, through books, always, and fear that, without books, I cannot see nor hear, and shall fail in interesting children sufficiently to keep their senses awake."

"Children are interested in what they can do alone, more than in what they merely assist. If you are interesting in things which they cannot discover by means of their senses alone, they are of course discouraged. You are looking in the right direction. Go on, but do not take aids,—not even a microscope, till you have trained the naked eye."

Miss Wise looked discouraged, and said: "I wanted to take the children out of doors, and teach them to read nature; but I do not know how, nor what beginning to make.

"Let me examine you," said the professor, smiling; "can you tell the familiar names of our common birds when you hear them sing?"

"No, sir."

"Here are several kinds of grasses that grow about here; can you tell which grows on low, and which on high land?"

"No, sir."

"Here are different kinds of earth—loam, clay"—

Miss Wise burst into a merry laugh.

"But, you see, all my life I have been a girl—have seen nature with a girl's eyes. Dirt was a thing that I must not get on my apron; tall grass, a thing that would soil my skirts; the woods, a place for picnics."

"I see, I see!" exclaimed the professor, echoing her laugh; "I grant you mercy to this extent. You may use my books to exorcise the girl out of nature—only for that. If you ever had or ever could have the privilege of being a ten-year-old boy, I should not let you have a book. But, Miss Wise, you will have a score of boys as well as a score of girls; make them whet your senses as well as each other's senses. If you manage rightly, they will suggest to you more than my books will."

"But the girls"—

"There is no reason why a boy's faculties should go to sleep in the house, or a girl's become benumbed out of doors. Remember, it is the faculties, the senses, that you are waking up. You are not acquiring a mass of knowledge."

"Thank you. What you have said gives me a definite though general idea of my plan for object lessons for next term."

Miss Wise bade the professor a good afternoon, and was leaving his study when he recalled her, to say,

"Do not throw away your blackboard; it can be used on object lessons for other matter than columns of parts and qualities."

When the spring term opened, the primary department was still mixed, having in it boys and girls from five to twelve years of age. The time allotted to object lessons was at first spent in showing the children how little they used their senses, by questioning them about things which all their lives they had seen, both indoors and out. The older girls were a little shocked when the teacher introduced the subject of housekeeping; and then astounded at the discovery of their own ignorance. Not one of them could tell much of the process of bread-making, beyond "Mix some flour, and water, and yeast." None could tell the different lengths of time required to cook different vegetables, nor, of course, the order of preparing a common dinner; and so of the process of washing. The boys, who made a great deal of fun, both of the topics and the ignorance of the girls, were alarmed and crestfallen when matters pertaining to the woodshed, cellar, and barn, were put before them. Miss Wise spent considerable time, not only in showing them how little they had used their eyes and hands, even ears and noses, but in impressing them with her idea. "I am not teaching you about farming or housekeeping, but I am trying to put up telegraph wires between your ears, eyes, hands—all the organs of sense—and your brains. The wires seem to be broken. Your eyes see, but do not tell the brain anything. Your ears hear, but the brain gets no message. Let us put up the wires and use them. What you tell me in these object lessons must not be found out by questioning other people, nor from books, but by using your own five senses."

Not to shock previous notions too much, two subjects were chosen. "Bread-making" for the girls, and "Planting" for the boys. The lessons alternated, and, from the wide range allowed, lasted for several weeks. It was wonderful how the subjects developed, so as to require the use of all the senses, and how each had something for the comprehension and interest of the youngest as well as the oldest. But fifteen minutes was allowed for the lesson each day, and this time was used by the teacher in collecting the information brought

—thereby encouraging the pupils—and in asking suggestive questions, to show the children what they did not know, and to direct their out-of-school investigations.

When these subjects presented nothing more of interest, the condensed sum of the several lessons was placed on the blackboard—the girls' subject first, and that of the boys the next day, carefully written and punctuated; and, after some directions as to the use of capital letters and points, both were erased. Then, as slate compositions were required, even in the primary department, the children were asked to write on either of the two subjects, as they preferred, anything that they knew about it, whether learned from their own investigations or from other sources. They, having a definite idea of what was required of them, wrote readily and fluently, and for the most part, with pleasure; though formerly, especially with the boys, composition-day had seemed to develop only —and all—the mule of their boy-nature.

The lessons were adapted, so far as possible, to "times and seasons." When the birds began to build their nests, Billy Grey, who had a reputation among his schoolmates for little else than playing hookey, displayed the greatest personal knowledge on the subject of birds, the locality and texture of nests, and the color and shape of the eggs of the different species.

"O! Miss Wise, he'd ou't to, 'cause he robs 'em," was the exclamation of the jealous, but good, little boys and girls.

"Yes," was the answer, "and I'm going to ask him to rob some for me."

There was a gale of long-breathed ohs, and a funny look of shocked orthodoxy on the faces of all the children, except Billy's. His would have served a painter whose subject was "The Birth of a Soul." Then and for that favor-restoring speech he laid his heart at his teacher's feet, and became her special champion and vassal.

Miss Wise explained that she wanted to make a collection of birds' eggs for the school, one egg for each kind of bird that built in that region of country. She instituted a society of bird-nesters, with a constitution and by-laws, chiefly restrictive in character, which, among other things, "resolved" that only one egg should be taken from a nest, and that Billy Grey

should be president of the society, with full power to punish by expulsion, or "other herein provided penalty, all unnecessary cruelty," etc., etc. The boys joined the society with a rush, and, after some pleading on the part of the teacher, admitted girls as members, limiting them to the investigation of "low-nest birds." The results were the happiest, and in the direct line of the teacher's plan.

Another boy, also given to "hookey," came to the front when wild flowers was the topic, and between him and the "bird-nesters," pale Willie Havens, who, winter and summer, late and early, was poring over some book, bad or good, to the destruction of both muscle and brain power for the future, finding something intelligent and interesting in the boy-tramps over field and through wood, joined them. He lost his pallor and nervousness, and his contempt for common boys, and gained health and vigor, mental and physical, and a respect for and from his comrades that he much needed, to say nothing of the joy of his father and mother at the breaking up of his book-worm habits.

Biddy Malone, the universally slighted one among the girls, was made happy for weeks in her prominence on the berry question. It was little enough pay for her compelled absence from school during the berry season, whereby she was likely to finish her education in the primary department.

There was no fixed manner of conducting these lessons. Miss Wise had three paragraphs in her plan.

First: show the children the need of using their faculties.

Second: direct them to something to use their faculties upon.

Third: use the results of their observation to encourage and incite them to a further use of their faculties.

Miss Wise had difficulties. Miss Myschif, whose constant theme (since a former minister had, by mistake, married a teacher instead of herself) had been the general worthlessness of school-ma'ams out of school, now declared Miss Wise to be entirely out of place in teaching housekeeping in school, Miss Wise's explanations being wholly set at naught.

Mr. Goodman, the Sunday-school superintendent, thought it wrong that his Tommy should be taught to rob birds' nests; but, in the autumn, his vanity would not allow him to conceal

the unusually fine collection that Tommy had made for his father, who was something of a naturalist.

It would require a considerable book to record Miss Wise's "Subjects" and "Methods," which would be useful only to imitators—a class of teachers for which we do not care to provide.

M. L. SHERMAN.

## *WHY ARE GLOBES SO LITTLE USED IN OUR SCHOOLS?*

IT is well-known that many schools are destitute of globes of any sort; that others are furnished with globes which are old, defaced, and practically worthless; and that, where the very best and most costly are provided, but little use is made of them. Why is this? It is not owing to incompetency among teachers, or a waning interest in the subject. Elementary and advanced geography and astronomy deservedly hold a prominent place in our schools, are usually treated very fully and enthusiastically, and are capable of being rendered most attractive and useful subjects of study. Hence, globes should be extensively used and prove invaluable aids to teachers and pupils: but, we believe, their experience in this respect is far from satisfactory, and that this is mainly due to the defective appliances at their command, or the manifest imperfections of the globes hitherto in use. It is not very surprising that not a few who control educational matters have regarded them as an expensive if not a superfluous luxury. Every experienced teacher knows that, with junior classes, they are of little practical value beyond showing the form of the earth, its poles, great circles, general divisions, and a few other elementary lessons; and, even for these purposes, they are incumbered with attachments which embarrass the teacher in his work, and impair the accuracy of the pupil's apprehension of what is being illustrated.

But it is chiefly in advanced work that difficulties become serious, and, in many instances, insurmountable. To make this apparent, and to prove the impracticable and unsatisfactory character of the ordinary horizon globe, it may be sufficient to submit the following well-known proposition, viz.: To

show the position and motion of the horizon of a place in 40° north latitude.

This is usually done by depressing the pole 40°, and bringing the given place under the meridian. But this method is open to the following obvious and fatal objections: (a) That it affords no illustration of the motion of the horizon. The very thing proposed to be done is not done at all. The wooden horizon is stationary, and does not correctly represent the real horizon which moves along with the given place. (b) What is really illustrated is presented in an incorrect and injurious form. The earth is improperly treated as movable to any position which suits convenience, and this results in (c) utter perplexity and confusion in the mind of the pupil. He has been taught to regard the globe as having a certain definite or natural position, and with this understanding he located the plane of the ecliptic, the plane of the equator, and the great circles; but now, in the attempt to use the globe to exhibit what it is really not fit to illustrate, the very basis of his knowledge is disturbed.

Similar inconveniences and inaccuracies might be shown, as occurring in the illustration of other problems, on account of the incomplete appliances now at the disposal of the teacher. For example, the question of the variation of the length of day and night; the relation of the rising and setting sun to the east and west points, for different latitudes, at different seasons of the year, etc. But enough has been said to show that improvement should be sought in this very important part of school apparatus. What is needed, and what will shortly be offered to the public, is a globe with such attachments as will render it capable of clearly and truthfully illustrating all problems within the entire range of physical and astronomical geography; and these attachments must comply with the following conditions:

1. They must be easily removed, so as to leave nothing but the globe for elementary lessons in junior classes. 2. They must be such that only those absolutely required for a given purpose need to be attached while exhibiting a specific illustration. 3. They must be adjustable, and capable of affording the teacher ample facilities for varying his illustrations, and thus adapting them to the circumstances and wants of his class. 4.

They must be simple, complete, and inexpensive. By these means the teacher's time will not be wasted in preparing for illustrations, no points need be omitted which require to be thus presented, and the globe, with its entire adjuncts, will be offered at such a price as to place it within the reach of the poorest and humblest schools. 5. Finally, these attachments must be so arranged, and capable of such motions, that the globe, in every illustration, can be made to represent the real position of the earth.

We are happy to announce that a globe possessing all these and many other capabilities has been recently invented, and the patent applied for, by M. MacVicar, Ph. D., LL.D., Principal of the State Normal and Training School, Potsdam, N. Y.

In our next issue we hope to give diagrams and a more minute description of what we believe is destined greatly to simplify and advance the study of the sciences of geography and astronomy in all our public and private educational institutions.

## *-ABLE OR -IBLE—WHICH?*

ENGLISH usage in words of pure English origin greatly prefers *-able* to *-ible*, as the ending of our passive adjectives. So natural and easy is this formation that every man uses it if he wants such an adjective, even when the dictionary fails to give him the word; as *climbable*, *clinchable*, *fillable*, etc., like *speakable* and *salable*. *Gullible* is an exception. So is *rendible*, meaning that may be *rent* or *broken*. Both are certainly out of harmony with the general usage of the language. They are to be ranked with *liar*, *beggar*, *pedlar*, *burglar*, *justiciar*, and *registrar*, the only active verbal nouns that end in *-ar* instead of *-er*. These exceptions to the innate law of formation and growth in our language were begun in ignorance and are continued by unthinking and servile imitation. But as there is a living power in all growth and development, which tends always to uniformity of results, *peddler*, the normal form, is fast superseding the abnormal and improper form. And so are other improper forms gradually passing away. But, alas! ignorance is also introducing new ones.

Latin usage requires *-abilis* with verb-roots of the first conjugation, *-ebilis* with those of the second, and *-ibilis* with those of the third and fourth. English usage confines itself to *-able* and *-ible*. And thus long *e*, as the connecting vowel in Latin verbs of the second conjugation, becomes in English either short *e* or *i*, as *movable* from *movere*, and *delible* (or at least in*delible*), from *delere*. "Deleble," though Websterian, and Worcesterian, too, is not English. Its second *e* is Latin. In*delible* has delatinized the same word and made it good English.

With these exceptions, English usage follows the Latin in most words of Latin origin; and it ought to follow in all. We might safely except all those words which are so thoroughly domesticated with us that we ignore their Latin origin, provided they have neither cousins nor cognates in our language. But words, like people, go in families, averaging, as people do, about five to the household, and maintaining the family likeness in every legitimate offshoot. Thus, if the first derivative of a root-word ends in *-able*, then all other suffixes that require a connecting vowel (such as *-bly*, *-bility*, *-tion* and *-nce*) must also use *a*. Thus, from *continue* we get continu*ance* and continu*ation*, and might get also continu*ant*, continu*able*, continu*ably*, and continu*ability*. And just so, *-ent*, *-ence*, *-ition*, *-ible*, *-ibly*, and *-ibility* go together; for short *e* and *i* are interchangeable. And thus, depend*ant* in English, though supported by high authority, is out of harmony with depend*ence* and depend*ent*, which are indubitably good, and utterly inconsistent with the Latin *dependere*, and its participle *dependens*, from which they all spring.

Hence, all English verbs in *fer*, derived from the Latin *fero*, ought to make the passive adjective in *-ible*, because the corresponding Latin verbs make it in *-ibilis*. And then the *fer* of the root, if accented, must, in derivatives, always double its *r* before *-ible*, and before every other suffix that begins with a vowel, except when the accent leaves *fer* and falls back to a previous syllable. The genius of our language is peremptory in requiring that a single final consonant, if accented in a root-word, shall always be doubled when it falls just before a vowel in a derivative word, except when the accent shifts backwards. This rule of spelling ought to be universal. It gives us the only distinction in form between the two sets of derivatives

from *plan* and *plane*, *rob* and *robe*, and all other pairs of words whose roots are identical in form, and differ only in quantity. Scholars ought never to violate it, even when the dictionaries do. And transfer'able (with the accent on *fer*) is, perhaps, the only violation that Webster gives.* *Preferable* does not violate it, nor does preference, deference, or conference. And *trans'ferable*, if we shift the accent back to *trans*, would not violate it.

L. J. C., then, in your May number (page 193), is in error when he says "The accent is of no weight in determining the spelling." When we add *-ing*, *-ed*, *-est*, or *-er* to *prefer*, the position of the accent, and that alone, "determines" that we shall double the *r*, and spell the derived words prefer-r-ing, prefer-r-ed, etc. And then, when we use the strictly similar suffixes *-ence* and *-able*, and shift back the accent from *fer*, this change of accent "determines" that we shall NOT double the *r*. Thus, words perfectly analogous in form are spelled differently by the sheer force of the accent. And thus it follows that prefer-able and transfer-r-able are not orthographically analogous, and must not have their similar terminations spelled alike, although the two words are identical, both in prime root and in suffix, and differ only in prefix and accent.

L. J. C. writes a good article, and justly insists that "lexicographers shall be guided by analogy." But now, while English analogy allows, and would even prefer, *prefer*-ABLE, Latin-English analogy requires *prefer*-IBLE,† because the Latin never suffixes *abilis* to a verb-root of the third conjugation. And English as well as Latin analogy requires the *r* of *transfer* to be doubled in forming its passive adjective, whether you use *-able* or *-ible* to form it, unless you change the place of accent.

The sum of the whole matter, then, is this: Prefer-able and transfer-r-able are both passable as English derivatives, if we wholly ignore their Latin origin; and then, analogy would require *prefer*-ANCE instead of *prefer*-ENCE. But the joint analogy of both languages, under which alone we can harmonize the spelling of all derivatives from a Latin-English root, requires *prefer-ible* and *transfer-r-ible;* and then, of course,

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* How about *equipar'able* and *infer'able*?—EDITOR.

† How as to *dividable*, *defendable*, etc.?—EDITOR.

confer-r-ible and defer-r-ible, if the accent remains on *fer.* And yet, *interfere* would make *interfer-ible*, as it does make *interference.* No derivative from *fero* can legitimately make its passive adjective in *-able.*

MONROE.

## *SELF-TAUGHT TEACHERS.*

TO-DAY is eminently the day of schools—the day of educational monthlies, of teachers' conventions and institutes, of discussion and comparison of methods, of model school houses, furniture, and books. No expense, time, or trouble is spared that the rising generation may have every possible advantage. But amid all this care for the advance of the pupil, how much is given to that of the teacher, either by himself or by others? We do not mean those intending to be teachers. That is the care of the Normal School. But how much do we read or hear in regard to the necessity of education for those actually teaching? Scarcely anything. Nor is there any ground for complaint. It is naturally and properly supposed that those who have reached the requisite age and development for taking upon themselves the responsibility of training the young, are competent to look out for themselves in things spiritual as well as temporal. But that such education is necessary, and worthy of the earnest consideration of every teacher, there can be no doubt. Nor is this said in ignorance of the fact that many teachers are constantly doing all in their power toward self-improvement—that they devote time, strength, and money which they can ill spare, and forego pleasures and relaxation which they really need, to this object. They are doing a noble work, and to them all honor. And yet to some, and perhaps to all, it may not be too presumptuous to offer a few suggestions on this most vital of subjects.

For what can be more vital to a teacher than the development of his own mind and character?—vital, not only in a general way, as in the case of every one of whatever profession, but directly, practically vital, to a degree that can be measured in dollars and cents. It is with the teacher as with the author,

The author must read, study, and meditate profoundly before he can put upon the untraced page the thought of fire. Even so the blank mind of childhood receives the impress of the teacher's character; and he is truly the best teacher who succeeds, not so much in cramming his scholars' heads with dates and rules, as in implanting in their hearts a love of knowledge, culture, and refinement, high ambitions and great moral truths. Such teaching is teaching indeed, and can be the result only of the constant, silent influence of the teacher's own character. The culture of his own mind and character should, therefore, be the first care of the teacher as well as of the author.

But some weary teacher may say, "All that's very fine, and no doubt, very true. But, suppose you have neither time, strength, nor money to spare; where is your fine self-improvement to come in then? After the last little scapegrace at school has finished his penance, I hurry home, perfectly jaded, to get a few moments' rest before supper; and after that I must sit up until late at night, doing some absolutely necessary work." Such is the case, more or less, of a sadly large number of teachers. To some of them, to talk of self-culture is, indeed, but mockery.

And yet there are really few teachers who are utterly unable to devote any time to this object, and there are many who can devote much more than they imagine. It is wonderful how it is possible to make time, under the most unfavorable conditions, if you but make up your mind that you will. The value of this art cannot be overestimated. It is stated of the wonderfully successful pleader, Sargeant Ballantine, that he has a way of doing the greatest quantity of work without ever appearing to be busy. He makes time. But in this matter each teacher must judge his own case. No general rule can be laid down. Probably, the most common way in which the precious hours elude the teacher's grasp is in staying after school, either to complete some unfinished work, or, more frequently, to punish some delinquent a little and himself ten times as much. Cannot teachers who are in the habit of doing this manage to save those invaluable hours, and devote them to health-giving exercise, and to study and reading. Teachers who have been in the habit of staying thus until five or six P. M. have been

known to resolve that they would leave school early every night, and do so with most beneficial results. Tax your ingenuity to devise punishments which shall not at the same time waste away your very life. Keep the refractory in at recess, or punish them in some way during school-hours.

There are many teachers who, if they could find time, have no strength for systematic self-improvement. They are barely able to get through their daily duties, and are dying by inches. Teachers, next to students, are, perhaps, among the most careless of their health, especially in neglecting out-door exercise. All admit theoretically, that exercise is most important, but practically, they are "too tired," or "don't feel like it." A little out-door air and sunlight every day, regularly, is absolutely necessary for keeping up the tone of the nervous system, and those who neglect it must expect to feel jaded, and nervous, and cross. Here, as ever, the well-being of the mind is inseparably dependent upon the body. "*Sana mens in sano corpore*" is the only rule.

It is a trite saying, in truth worn threadbare, but full of hope and encouragement to those ambitious and able to work: "There's plenty of room up higher." Few people who earn their living really have more time to themselves than teachers. Every afternoon and evening, holidays and vacations, give them an opportunity which few enjoy for fitting themselves for room up higher. The teacher's calling is a noble one, not only in the influence which he exerts on the destiny of the young immortals in his charge, but also in the grand opportunities open to himself. Few enjoy such facilities for practising perseverance, love, tact, and all the virtues, besides storing the mind with daily additions of knowledge. In school the teacher may enrich his character to the best advantage; out of school, his mind. The progress will be slow, the failures many and disheartening, as always. "All success proves partial failure; all advance implies what's left behind." Yet if each setting sun brings some fresh accession of wisdom and experience, some new facts or beauties gained, some advances made in perseverance, self-control, knowledge of self, and knowledge of others, the day will at last dawn which shall bring the summons, "Come up higher."

R. W. CONANT.

## *ON ACCENTUATION.*

THE accentuation of the words given below is so often misplaced and so difficult to retain, that we give our readers a series in sentences, showing how the accent should be placed.

The RULE is clear and simple. The *noun* is accented on the first syllable, the *verb* on the last; but even a grammarian, without familiarity, will often make a mistake. There are few words in the language so often *misaccented* as the ones we are about to give, and there are few words which enter more largely into conversation.

Proj'ect, prog'ress and prod'uce are seldom accented properly.

I absent' myself to day and was ab'sent yesterday.
I abstract' from Cato's ab'stract.
I abuse' him not for his abuse'.
I accent' the word with the proper ac'cent.
I affix' an aff'ix properly.
I colleague' with my col'league.
I collect' after my col'lect.
I comment' on your com'ment.
I compound' and render the com'pound.
I compress' and apply the com'press.
We concert' and render the con'cert.
They concrete' and form a con'crete.
We concord' and produce con'cord.
We conduct' them and form their con'duct.
We confine' the animal and erect his con'fine.
He conflicts' and produces the con'flict.
We conjure' him not to con'jure.
They conserve' our con'serve.
He consorts' with his con'sort.
I contest' and so enter the con'test.
The context' jumbled the con'text.
We contract' and make our con'tract.
We contrast' and produce the con'trast.
We converse' and hold the con'verse.
We convert' and gain con'verts.

We convict′ and confine con′victs.
We convoy′ and protect the con′voy.
We do not desert′ into the des′ert.
We digest′ from the proper di′gest.
We discount′ and render the dis′count.
We entrance′ him at the en′trance.
We escort′ with an es′cort.
I essay′ to produce an es′say.
I excuse′ your ex′cuse.
His exile′ rendered him an ex′ile.
We export′ our ex′ports.
We extract′ from the proper ex′tract.
They ferment′ and produce fer′ment.
I frequent′ the hall and make fre′quent calls.
They are minute′ in exacting min′utes.
They misconduct′ and show miscon′duct.
We object′ to your ob′ject.
We outwork′ them at their out′work.
We overcharge′ and produce an over′charge.
We permit′ as our per′mit shows.
Such a prece′dent forms a bad prec′edent.
We prefix′ the pre′fix.
We prelude′ with the proper prel′ude.
We premise′ and give the base of the prem′ise.
We presage′ and give the pres′age.
I present′ the letter and make a pres′ent.
Our country produ′ces immense prod′uce.
We progress′ and make rapid prog′ress.
We project′ and form the proj′ect.
We protest′ and write our pro′test.
I rebel′ against law and am a reb′el.
We record′ our names in the rec′ord.
We refuse′ such ref′use.
We reprimand′ and give a rep′rimand.
We reprint′ and produce the re′print.
We retail′ and form the re′tail of the place.
We subject′ him and make him a sub′ject.
I survey′ on the coast sur′vey.
We torment′ him by severe tor′ment.
I transfer′ and now make the trans′fer.

We transport' the goods in a trans'port.
We undress' and put on our un'dress.
"Second' the motion" would follow, but we do not decide, though we have heard it by a first-class scholar.—*Pen and Plow.*

## *GAIL HAMILTON ON EXAMINATIONS.*

IN conducting a public school examination the greatest care should be taken to preserve intact the pride and sensitiveness of both teacher and pupils. The object of the examination is to find out how things are; not to show how they ought to be. It is to see what the pupils know; not what they do not know. If the methods of the teacher be bad—if he be superficial, uninteresting, inaccurate, incapable—examination-day is no time to correct or reveal his mistakes or to supply his deficiencies. If he be young, inexperienced—or a woman (the rhetoric may be at fault, but I trust not so the logic)—he will have difficulty enough in carrying himself well without extraneous stumbling-blocks. I think, therefore, that it is generally better, more fair and conclusive, to leave the examination in the hands of the teacher than to delegate it to any member or members of the examining board. It is on the old Scripture principle: "My sheep know my voice." The pupils are familiar with their teacher and his ways of questioning, and that familiarity and the confidence it inspires are likely to give them command of their knowledge; while the stranger's voice and his different way of looking at things are likely to drive their small store of information out of their poor little heads. If, however, the examining committee do put the questions, they can hardly confine themselves too closely to the book and the subject-matter. They should know exactly the pages which the class have been studying and on which they ought to be prepared, and then the point is to ascertain whether the pupils know—not cognate things, ramifying things, parallel cases, facts which depend on the principles laid down on those pages; but whether they know those pages themselves. We hear a great deal said about pupils being taught to think, and examiners are sometimes so eager to find out whether pupils can

think, that they are but bunglers in finding out what they know. But the first requisite to thought is knowledge. We need facts, and not inferences. Let us make sure that pupils know what is in the book and trouble ourselves less about what is outside the book. In our desire to make learning interesting we are in danger of forgetting that it needs first to be accurate and sure. No amusement, no interest, no explanation, no illustration is any substitute for the action of the individual pupil's own mind, for his ability to pin his attention to his book without aid from any person.

With all our object-teaching and all our new methods, there remains, as at the beginning, just one thing to do; and that is, to make the pupil lay hold of his geography lesson, and his grammar lesson, and his arithmetic lesson, and learn it thoroughly. And the way to learn it is to commit it to memory. It is not necessary to worry about his understanding it. The surest way to understand it is to commit it to memory. "John 'Enery," said the energetic mother to the anxious acrobat, "if you throw your 'art over that trapeze your legs will follow." If a boy grapple a fact with his memory, he will be in the direct line of grappling it with his comprehension. If he does not fully comprehend it at first, he will grow up to it. The understanding is in no other way so strengthened as by the stores of memory. The mind acts on the facts with which memory has endowed it. Judgment is based upon memory. Let us, then, be sure first that the pupil has learned his lesson.

In trying to ascertain how vigorously and promptly his mind acts on what he has learned, we should not forget that nothing so discourages and demoralizes children as to be asked questions which they cannot answer. It does not signify that they are not to blame for their inability. They have no discernment to tell them what they ought to know and what they need not know. They feel that the creditable thing is to answer all questions put to them; and if they cannot answer them they never suspect there is anything unfair in the question, but they feel that they are not pleasing their teacher, they are mortified before their parents, and are made generally uncomfortable. I have seen a class of little boys and girls ten and twelve years old, fresh-faced and beautiful in gala robes, evidently running over with the knowledge which they had been a whole term in

acquiring, and which they were innocently and charmingly eager to display, stand up before a good-natured, well-meaning gentleman, who no doubt thought he was doing God service, and be speedily brought to shame and confusion of face because he would not ask them of what they knew, but persisted in leading them by untrodden ways. It is true that his questions involved the principle which had been studied; but it is true also that they implied a generalization which we have no right to require of children.

We do not always ourselves make a brilliant foray into these fresh fields. If a girl of twelve, who has never studied Latin, have a tolerable notion of what the equinox is, I do not see that much is added to her store by being told that it comes from two Latin words, meaning equal and night. There is certainly not enough added to compensate her for the mortification of being obliged, before a roomful of her mothers and aunts, to reply to any question "I don't know."

Among the birds of a certain answer in geography appeared the condor.

"How large is the condor?" asked the benevolent gentleman. The little girl hesitated.

"Is it a large or a small bird?"

"A large bird."

"Well, how large?"

"The largest there is."

Now, if it were necessary to put the question, here was an intelligent and sufficiently accurate answer, and if the examiner had been as wise as he was good, he would have given the girl a commendation, and dismissed her triumphantly with honors easy. But he could not let well-enough alone, and must needs rush on to his own destruction. "Cannot you tell me how large?"

No answer.

"As large as a calf?" As if a calf had any determinate size, and could be made a standard! Surely, the little girl's idea of a condor was as accurate as the committee-man's idea of a calf.

A little boy gave the definition of Reduction: "The changing of numbers from one denomination to another."

"What have you left out?" asked the committee.

The boy paused. If he could have been permitted to collect his senses in silence, no doubt he would have found the missing link; but the benevolent gentleman pursued his lucubrations. "You have left out the most important part of the definition. You have left out four words which contain the most important part of the definition." Of course, a child of twelve cannot listen to a grown-up gentleman and carry on an abstract mental process at the same time. Adult people in society can sometimes assuage their sufferings in that way; but it requires skill and practice. Another pupil supplied the deficiency: "without changing their value."

I question the fact. It seems to me that the adequate definition of Reduction is what the boy gave. That the added clause is not only not the most important part, but is really no part of the definition. True, the value is not to be changed, but that is an extraneous matter. If you have changed the value of the number, you have done something besides reduce. You may add that or any other negative clause to the definition without destroying, but also without increasing its accuracy. It remains that Reduction is the changing of numbers from one denomination to another. Is it not so, Monsieur mon frère?

The children's questions were answered and their examples performed with promptness and correctness; but the ill-starred committee could not leave them their little triumph unmarred —must needs try to get into and bring out of their heads that multiplication by a fraction is division. Oh! if men would but know in this their day the (in some respects) narrow range of a child's mind. Fractions are complicated, at best. If a boy can learn the mechanical processes, for heaven's sake, let alone the philosophy of it. If he can add fractions and multiply fractions and divide fractions with ease and readiness, be content, and do not try to muddle them all up together. It is not of the slightest use. This committee hammered away at the class till he got out the answers he wanted; but he got them only by exclusion. It was easy to see that the right answers came only because the other answers had been pronounced wrong. One of the brightest boys in the class said, succinctly, after he got home: "Mr. Committee was wrong then. I looked in the book afterward." That was what his long and lucid explanation

amounted to. Get the processes into the young minds, and the rationale will come of itself, in its own good time.

In the best of schools, a vast amount of geography, arithmetic, grammar, and especially philology must be left unlearned. With the best of teachers, the committee on examination-day can ask thousands of questions which the pupils cannot answer. Some of the information they are incapable of grasping. A great deal of it is quite within their power. But time is limited. Many matters of interest must be slightly touched, and many more left untouched. A good teacher is the best judge of what he can do and what the pupil can do. He will explain and suggest as far as is practicable; but there will be many things, both about calves and condors, that must be left to future reading. Many mathematical principles must be relegated to the pupils' maturer years. It is easy for a committee to ask interesting questions and convey much valuable information. It would be equally easy and agreeable for the teacher to do it, if you would give him time. But the teacher has the steady pull day after day, week after week. Why should the committee come in, once or twice a term, only to divert the minds of the pupils in presence of their parents, and thereby put himself into contrast, perhaps unfavorable to the teacher, who does all the real work? "Mention three domestic animals," said a teacher.

"A horse."

"Yes. Now the second."

"Another horse."

"No. I want your others to be a different kind."

"Two cows."

Certainly a horse and two cows are three domestic animals; but is it worth while to vex these dear little devious yet direct minds with complex processes? Rather let us strengthen them with simplicity, with order, with routine, with small requirements rigidly secured, with small victories generously awarded. Let us be sure that a little learned by themselves is more worth than a great deal explained or taught by their teachers. The channel must be narrow or it never can be either wide or deep.—*The Independent.*

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A LITTLE school-boy wanted to know if by eating dates he would not be able to make an almanac.

## *WASTE IN EDUCATION.**

ANOTHER point I make is the teaching of unimportant things. In connection with some studies are found many things that either have no essential connection with them at all, a mere temporary connection, or one that is worthy the attention of professionals alone. It makes one shudder to think of the trash which scholars have been compelled to learn in connection with the simple studies of grammar, geography, and arithmetic, to say nothing of the waste of labor in connection with classical studies and the higher mathematics. Many grammars insist upon distinctions and definitions which confuse rather than enlighten the beginner. Perhaps no teachers are left who compel their students to commit long lists of prepositions and adverbs, so that they may know them to be such in parsing; but other things as absurd are required, not in common schools alone, but in colleges.

Poor text-books come in here for their share of blame. Small text-books, containing only the essentials of the subjects treated of, only those parts that have life in them, that cannot be eliminated without leaving the subject imperfect, are rare. It takes a brave man, and one merciless towards himself, to make a small, simple, but thorough text-book. Such books we must have, if we use text-books at all.

### STUDY MERELY FOR DISCIPLINE.

It seems to be the aim of some text-book makers, and some teachers too, to make every study as difficult as possible, for the sake of the discipline. No doctrine is more fallacious. Get your discipline by doing a greater amount of work, and doing it in better style. What sensible man would turn aside to ride over quagmires and stone heaps for the sake of more exercise for himself or horse? An oak tree might be felled with a stone hatchet, and one would get a deal of exercise in doing the job; but the same time and strength, with a good steel axe, would give as much exercise and leave something to show for the labor. Leave stone hatchets to savages; let

* Extracts from President Chadbourne's recent address.

civilized men use the sharpest steel axes they can find. They will thus do the most work, and do it in the best manner. This principle of dealing with essentials mainly should prevail in all the work of education. We have too much to do to spend time fooling over complicated arithmetical puzzles which abound in some books—questions which no one should undertake to solve till well versed in algebra and geometry. At the proper stage of education, such puzzles, which are a discouragement to the young scholar, because he thinks them essential to the subject, will be solved in the natural progress of his work. They are an annoyance and discouragement simply because they are introduced before their time, before the study of the principles on which their solution depends.

### STUDIES MUST BE ADAPTED TO AGE AND TO DEVELOPMENT OF PUPILS.

Do not charge me with undervaluing early education. It is a great thing for the child from the first to breathe a literary atmosphere, and in rare instances the crowding I have spoken of makes real prodigies of learning, of which John Stuart Mill was an example—"a fine example," some would say: a sad warning, I should suggest.

In all the early years, say to the age of fourteen, the studies should be light—just enough to keep the appetite for learning keen—while the physical system has no strain brought upon it by over-confinement or hard mental labor. In these early years the simple studies of spelling and reading and the simple forms of mathematics, in which the large majority of students who apply for admission to colleges are wofully deficient, should occupy the chief attention as studies in the class-room. The outlines of geography and history should be so fully given, that the reading of a newspaper shall be intelligent work, because the scholar knows where events transpire; and such training in natural history should be secured, that the senses may be on the alert for every new form and phenomenon in the natural world. By those who have the opportunity, French or German might be learned orally, without the details of grammar. If this is done, with no more labor than is often wasted in teaching grammar and some parts of mathematics, when the scholar is utterly unprepared for the work—if this is

done, and a taste for choice reading secured, at the age of fourteen or fifteen years you are ready to begin the continuous work of education in earnest, so that the student shall not only acquire knowledge rapidly, but shall remember the processes by which he acquires it.

### TOLERATION OF OLD ERRORS IN TEXT-BOOKS.

Another source of waste is the copying of old mistakes and absurdities in text-books and methods of instruction and government, simply because they are venerable, and have been practised or recommended by those who have been famous in the work of education. We can hardly illustrate this point fully without danger of troubling some one who has written a book, or who still clings to some school tradition that might be denounced. We must be content with stating the principle and giving one or two illustrations.

The Linnæan system of classification of plants was a purely artificial system, understood to be so by its great author, and yet such was the prestige of a name, and so persistent the custom of copying, that this system held its place in our text-books and schools long after it might have been displaced by a natural system that represented botanical truth.

### ABSURDITY OF THE OLD CUSTOM OF EARLY MORNING PRAYERS IN COLLEGES.

The early morning prayers, as formerly conducted in many colleges, were an example of the absurdities even wise men will accept from custom. Students were called out of bed before it was light, on cold winter mornings, to hurry to a chapel without fires, and then pass to the recitation-room to recite by the dim light of oil-lamps.

The ill-temper of the students found expression in rebellions and attacks on chapel and recitation-rooms. And yet it was very difficult to change this old custom, handed down from the dark ages—a custom injurious to health and good morals, and opposed to common sense.

### ENTHUSIASM ON THE PART OF THE TEACHER.

There is failure to secure energetic work and the best results from lack of enthusiasm. Without this, no teacher can have

the best success, however learned and faithful and hard-working he may be. Enthusiasm is the heat that softens the iron, that every blow may tell. Enthusiasm on the part of the teacher gives life to the student and an impulse to every mental power. It gives the work of the school-room a quickening impulse, and by this impulse makes the student a gatherer wherever he goes. It gives to the student independent power—power to go alone. When this is accomplished, there is no more waste in lifting, dragging, or driving. It was the enthusiasm of Linnæus that filled his lecture-room with students from all parts of Europe, and then sent them over the world to gather new treasures for themselves and their master. It was the enthusiasm of Agassiz that clothed the commonest things with new life and beauty; that charmed every listener and transformed the aged and the young, the ignorant and the learned, into joyful learners. Another man, with the same learning, the same devotion, and equal labor, might not accomplish one-tenth as much, because he failed to enkindle that interest that quickens every mental power and lights the fire of latent genius, which, once enkindled, reveals to its possessor truths far beyond the range of those whose minds have never been touched by this life-giving power of enthusiasm. It is said one loses this enthusiasm after a while. Then he ought to stop teaching. If he cannot grow enthusiastic presenting the plainest rules of arithmetic and Latin for the fiftieth time to a new mind, then he is unfit for his work, and should spend his strength on stone or clay, which can only yield to force, but never take form at the mere glow of enthusiasm in the worker.

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If this earth were to grow in density until its mass were equal to that of the sun, then a half-ounce weight—one of those that are used to balance our letters—would weigh 4¼ tons. A man of average weight would be drawn to the earth at a weight of 20,000 tons. An object raised from the earth a single inch would, in falling that short distance, acquire a velocity three times greater than that of an express train. Such is the might with which the sun rules this earth.

## *HOW TO TEACH.—Continued.*

### OUTLINES OF ZOOLOGY.*

IN relation to this part of the fifth grade, the following suggestions are made:

Zoology being a science of *classification*, it is indispensably requisite to teach the distinctions upon which the classification depends.

Only the *simplest outline* need be taught, with such facts and details as seem most naturally appropriate to illustrate the subject. The process of classification being naturally *objective*, that is, animals being classified by their obvious peculiarities, the pupil should be led, by an exercise of the observing faculties, to discover the leading peculiarities himself. For instance, suppose the teacher wishes to lead to the perception of the basis of the classification into the four great types or sub-kingdoms. Write upon the blackboard the names of a sufficient number of familiarly known animals without classification. If he have their pictures in books, or on charts, let each be shown before asking and writing its name. Let the pupils spell each name before the teacher writes it. Suppose them to be *lobster*, *ox*, *oyster*, *dog*, *beetle*, *starfish*, *snail*, and *coral*. Lead the pupils to see and decide for themselves which two or three most resemble each other. Adroit questioning, and a little patience, will soon make them group together the lobster and the beetle, on account of their hard, jointed rings, and their many equally hard limbs; the ox and the dog from their four legs, and their similarity as to eyes, ears, and other organs; and the oyster and the snail, from their hard shells and their soft bodies. The remaining starfish and coral will present difficulties, because not so familiarly known; but these may readily be overcome by the use of pictures or even rough sketches on the board.

Having thus grouped the names upon the blackboard, a few questions will lead to the perception that the animals of one group have a *backbone*, composed of many pieces, and an

* From the recent volume, "How to Teach," by the Superintendents of the New York City Schools.

internal bony skeleton; those of another are made up of *distinct rings and joints;* and so on of the other groups, each of which may now be readily expanded, by asking the pupils for the names of other animals, and the reasons for assigning them to a particular group.

Then, AND NOT TILL THEN, the teacher should give and explain the terms *vertebrate, articulate,* etc., carefully reviewing and questioning the class, to see that all is understood.

In the same manner, the classes of the vertebrates, and the principal orders of the mammalia, etc., may easily be drawn from the pupil's own observations of resemblances and differences.

The terms *mineral, vegetable, animal, organic,* and *inorganic,* should be previously taught or reviewed in a similar manner, through the perceptions of the pupil, guided by the questions of the teacher.

*Remember that the skilful use of interrogation is the teacher's chief means of awakening thought, and producing lasting impressions.*

Well-known typical animals should be taken as the *objective basis* of the classification; such as *man, monkey, bat, cat, rat, horse, deer, cow,* and *whale;—eagle, parrot, canary, rooster, ostrich, snipe* and *duck;—turtle, alligator, rattlesnake,* and *frog;—perch, cod, shark,* etc.; *bee, butterfly, beetle,* etc.;—*spider, cray-fish,* and *crab;—squid, snail,* and *oyster;—starfish, jelly-fish,* and *corals.*

The simplest names should be used, where possible, in preference to the more scientific, or, at least, as preparatory thereto; thus, it is better to use the term *four-handed* than *quadrumana; gnawers* than *rodentia; scratchers* than *rasores; two-winged* than *diptera,* etc. A few scientific terms, such as *mollusc* and *bivalve,* are in such common use that they may be readily explained and applied.

*Associated facts not strictly scientific*—such as the uses of animals, anecdotes concerning them, their peculiarities and habits—which the pupils themselves may have observed, will form a valuable part of these exercises, and a means of increasing the interest of the lessons.

The pupils should be encouraged to acquire as many facts as possible, by their own observation and research out of school.

The exercises should be *conversational*, the reviews frequent; the instruction should also embrace exercises in classifying well-known animals from a miscellaneous list, giving the reasons in each case. Too much ground should not be attempted at first.

Some system of *diagrams*, roughly sketched in chalk, will be found of great service in assisting the pupils to remember the classification. The best and simplest is, probably, that used in the ordinary "genealogical tree." The diagram should be gradually developed as the lessons proceed, and not the whole of it given in the preliminary stages.

No teacher can give such a classified "outline" without having first, by careful study, acquired it. This can be readily accomplished by means of any good school manual on the rudiments of Natural History.

Excepting in important instances, it is not expected that the classification should extend to *species* and *variety*, sometimes not even to *genera*. It is desirable that the pupils should have some definite ideas as to the relations of the following terms used in zoology: *kingdom*, *branch* or *type*, *class*, *order*, *family*, *genus*, *species*, *variety*, *individual*. These can be best exhibited by a diagram, but they should in no case be presented by formal definition. All but the last four should be mentioned in describing any given animal.

The exercises should include a portion, at least, of the topics suggested in the following synopsis, which is here presented for the guidance of the teacher. This synopsis comprehends three successive outlines, each complete in itself, or taken with that preceding it.

### First General Outline.

Distinction of organic and inorganic objects taught objectively. Differences between animals and plants. What is an *organ?* An animal? Four great *types* of animals (Cuvier's, and omitting the *protozoa*). Exercises in classifying, by *types* only, such animals as the *dog*, *lobster*, *clam*, *coral*, *shad*, *wasp*, *goose*, *star-fish*, *garter-snake*, *shrimp*, *toad*, *tortoise*, *oyster*, etc. The reasons for the classification should be given in each case. Each type to be then briefly defined. Why vertebrates are placed first.

### Second General Outline.

Classes of Vertebrates.—(Tenney's arrangement is here selected as being brief and simple, but any other may be taken.) Illustrate, as by types, by mentioning animals belonging to the several classes, mammals (those which feed their young with milk), birds, reptiles, batrachians (frog kind), fishes; brief description of each class to be given. Name common vertebrates to be classified, occasionally mentioning an animal not a vertebrate, in order to test the attention and accuracy of the pupils; for example—*alligator*, *robin*, *mouse*, *worm*, *herring*, *toad*, *lion*, *jelly-fish*, *rattlesnake*, *elephant*, *flea*, *hawk*, *turtle*, etc., etc.

Classes of Articulates to be treated very briefly, but in the same manner as the vertebrates. Simplest division, as *insects*, *crustacea*, and *worms*, to be employed.

Classes of Molluscs.—Treat also briefly, by referring only to their general characteristics. Teach the meaning of the terms *univalve* and *bivalve*. Specimens of shells will be useful for illustration; but it must be remembered that the structure of the animal itself is far more interesting and important than that of the shell which incloses it. A living oyster or clam, opened and carefully examined, a living snail, and a tumbler of water containing a few of the small molluscs found in every pond, will give clear ideas. A small aquarium will be found very useful.

Classes of Radiates, probably treated with sufficient fulness in connection with types. Review if necessary.

Here it would be well to mention the grouping of animals, as *herbivorous*, *carnivorous* and *omnivorous;* also the general relations of the *teeth* of animals to other peculiarities, such as *feet*, *forms*, *food*, *digestive apparatus*, and *habits;* also, as far as may be possible, illustrations of the importance of their several functions in nature.

### Third General Outline.

In this outline some orders should be omitted, or but briefly considered, because not readily treated objectively. If all the prescribed classes cannot readily be taught, owing to the lim-

ited available time, selections sufficiently complete in themselves may easily be made, as of the class mammals, or birds, or of the type articulates.

MAMMALS.

*Two-handed* (*Bimana*).—To be treated briefly. The five races of men, with their characteristic peculiarities. The geographical distribution of each to be also briefly referred to.

*Four-handed* (*Quadrumana*).—A few examples, according to the experience of the pupils. Refer to the geographical distribution.

*Hand-winged* (*Cheiroptera*).—Use a drawing, or a dried, or a living specimen, if one can be procured. Any interesting facts about bats, and their nocturnal habits.

*Insect-eaters* (*Insectivora*).—Treat very briefly. The *mole*, its habits—refer to its small, hidden eyes, etc.

*Flesh-eaters* (*Carnivora*).—To be treated more fully. Refer to general structure of teeth, feet, and stomach. Refer to *cat family*, using common cat as type; *dog family*, using dog as type; *weasel family*, their form, habits, etc., naming *sable*, *marten*, *ermine*, and *mink*, and referring to the value of their furs; *bear family;* also briefly to *seal family*.

*Pouched animals* (*Marsupials*).—Refer to the geographical distribution. The exception of the opossum.

*Gnawers* (*Rodents*).—Use the *rat* or *squirrel* as a type. Refer to peculiarity of teeth, and the provision for their continued growth. Teach about the *rat*, *mouse*, *squirrel*, *beaver*, *rabbit*. Refer to the *woodchuck*, *porcupine*, and *guinea-pig*.

*Thick-skinned* (*Pachyderms*).—Treat briefly of the *elephant*, the *rhinoceros*, and *swine* families; more fully of the horse family, including *horse*, *ass*, and *zebra*. Geographical origin of the horse, its dispersion, and its influence in human affairs.

*Cud-chewers* (*Ruminants*).—Relations of food to teeth, stomach, feet, etc., etc. Teach three families: 1. *Deer family*, horns solid, deciduous; 2. *Hollow-horned family*, (horns permanent); 3. *Camel family* (hornless). Refer to *llama* and *vicuna*.

*Whale-like* (*Cetacea*).—Refer to the fish-like character of the whale; how it differs from a fish; its uses. The *porpoise* and the *dolphin*.

### Birds.

*Birds of Prey* (*Raptores*).—Vulture, falcon, owl, condor, hawk, eagle.

*Climbers* (*Scansores*).—Parrot, woodpecker, etc.

*Perchers* (*Insessores*).—Humming-bird, swallow, king-bird, thrush, sparrow, canary, etc.

*Scratchers* (*Rasores*).—Gallinaceous birds and dove family.

*Runners* (*Cursores*).—Ostrich; its habits.

*Waders* (*Grallatores*).—Crane, stork, snipe, etc.

*Swimmers* (*Natatores*).—Duck family; swan, petrel, penguin, albatross, etc. Refer to *nests* of birds, also their *migrations*, *instinct*, etc.

### Reptiles and Frog Family.

Treat very briefly, teaching something of turtles, crocodiles, and alligators; serpents and their fangs; the frog and its transformations.

### Fishes.

Treat the classification very briefly; show distinction between the two groups, bony and cartilaginous fishes, with the orders spine-finned and soft-finned; also the shark and the sturgeon.

### Articulates.

These present many advantages for the school-room. They are small, and easily procured for perceptive teaching. A simple microscope is of great assistance in awakening an interest. Of *insects*, collections of type specimens can easily be made. Only the simplest and most interesting facts, however, need be taught. The general characteristics of this class of animals should be explained—their structure and the functions of their chief organs. Their wonderful *transformations* should be explained and exemplified; also the difference between *insects proper*, *spiders* and *many-footed articulates* (*myriapods*).

The following orders should be taught and exemplified:

1. *Membrane-winged* (*Hymenoptera*).—Including the *bee family*, the *ant family*, the *wasp family*, the *ichneumon family*, their peculiarities, habits, and *instinct*.

2. *Scale-winged* (*Lepidoptera*).—Moths and butterflies, how distinguished; caterpillars, etc., clothes-moth, geometer.

3. *Two-winged* (*Diptera*).—Mosquito family, wheat-fly, house-fly, etc.

4. *Case-winged* (*Coleoptera*).—Beetle, fire-fly, weevil, etc.

5. *Half-winged* (*Hemiptera*); or bugs, cicadas or harvest-flies, tree-hopper, cochineal, boat-fly, etc.

6. *Straight-winged* (*Orthoptera*).—Cricket, katydid, locust grasshopper.

7. *Net-winged* (*Neuroptera*).—Dragon-fly, May-fly. Refer to the white ants.

*Spiders* (*Arachnida*).

*Many-footed insects* (*Myriapods*).—Centipedes.

*Crustacea.*—Crab, lobster.

*Worms.*—Earth-worm.

## *THE GEOGRAPHICAL EXHIBITION IN PARIS.*

"SO fine a collection of maps, globes, and scientific instruments has never, it may safely be said, been before seen. It is chiefly installed in the restored southern wing of the Tuileries, reaching up to the topmost story, but there are annexes on the terrace alongside the Seine, and the national library forms an additional annexe, the valuable maps, charts, etc., of that institution being thrown open to public inspection. Taking this first in order, mention must be made of ancient maps, dating from the eleventh century. It is curious to remark how loose a rein was given to the imagination in the infancy of geography. Mere guessing or preconceived ideas filled up the vacuum left by actual investigation. Many of the maps, moreover, are rather pictures than maps—the ocean studded with vessels, and the interior of continents being filled in with representations of fighting negroes, wild beasts, trees, etc. Africa, in particular, is favored with these ornaments. The frontispiece of the Commentary of Beatus on the Apocalypse, a MS. of the eleventh century, consists of a map of the world elaborately designed in this fashion, and is the oldest production of the kind to be found in the exhibition. There is also the fac-simile of a map of the world executed by order of

Henry II., or, as some critics think, in the reign of Francis I. There are Chinese and Japanese maps, not, of course, of so remote a date. The oldest of them is dated 1671, but equally interesting. There are also charts of the Mediterranean, by Gaspar Viegas, 1534, an Arabic celestial globe in bronze of the eleventh century, Arabic astrolabes, a planisphere, perpetual calendar of the seventeenth century, plans of the towns dated 1572, a plan of the environs of Versailles drawn by Louis XVI., and a portrait of Sir John Franklin, presented by Captain Washington, in 1839. Passing on to the Louvre, it is difficult to single out a few from the many splendid maps due to the initiative of various governments. One of the walls of the hall in which the Congress will meet is occupied by the map of France, prepared by the military staff, 1818 to 1875. It is on the scale of 1 to 80,000, and this, it is said, is the first time the separate sheets have been put together. A colored line marks off the territory ceded in 1871, which had been surveyed before it had ceased to be French soil. The German, Austrian, and Russian official maps are equally elaborate. Perthes, of Weimar, naturally occupies a prominent place in the German department; the relief maps exhibited by him and many other firms are admirably executed, and must be of inestimable service in teaching geography. This branch of education, by the way, has confessedly been too little attended to in France, and there seems a great desire to make up for this deficiency."

## *INDUSTRIAL DRAWING.*

IT must be borne in mind that, on the first of October next, in accordance with the act passed last May, the Board of Education in each city, and the local Board of each Normal School in which drawing does not now constitute a part of the regular course, must be prepared to offer free instruction in that study. Our full concurrence with the spirit of this law has already been expressed. The following subjects for systematic instruction are suggested for the first year: Free Hand Outline Drawing from Flat Copies—that is, printed copies; the Elementary Principles of Original Design; Free Hand Model and Object Drawing. It is further recommended that

"the exercises should embrace the following features:" Geometrical Forms; Memory and Dictation Exercises; Conventionalization of Forms; the Principles of Elementary Design; the Principles of Free Hand Perspective.

## *REPORTS FROM THE SUMMER EDUCATIONAL MEETINGS.*

### THE NATIONAL EDUCATIONAL ASSOCIATION.

THE opening session of this Association at Minneapolis, Aug 3d, was claimed, by President Harris, to have the largest attendance of any in its history. Over five hundred delegates, from all parts of the United States, put in an early appearance. Addresses of welcome, delivered by Mayor Merriman and Gov. Davis, and a response by the President, introduced the exercises. President Harris outlined the work of the convention, which he resolved into three separate departments. Prof. Phelps presided over the Normal section; Mr. Harrington over the Elementary; and President Noah Porter, of Yale College, over the Higher Educational.

In the Normal Department, a paper was read by Miss Lathrop, of Cincinnati, on "Professional Education of Public School Teachers," which favored a post-graduate course in high schools for normal training, and urged the feasibility of normal institutes and didactic professorships in colleges. A general discussion ensued, on the normal schools of Minnesota, Nebraska, Wisconsin, Michigan, Iowa, and Illinois, participated in by President Allen of Illinois, Prof. Albee of Wisconsin, and a number of others. Forty-five minutes of discussion were given to each of the following topics: "What are we doing for the development of social culture?" "What for moral character?" "What for the establishment of social economy?"

In the Elementary Department, Mr. Harrington read a paper on "Language Teaching," in which, drawing a line between solid, substantial education and that of mere words, he advocated a teaching of the former rather than of the latter. "That marvellous thing, the modern newspaper," said the speaker, "must be taken into account as a co-worker with the

schools in the great field of American education." Supt. J. L. Pickard, Mr. Rolf of Chicago, Prof. Olney of Michigan, Mr. Witmer of Philadelphia, and others, took issue with the speaker. Prof. Olney thinks that teachers, like preachers, are more successful in portraying sin than virtue. A broadside was levelled at the present system of introducing new text-books, not at all agreeable to the school-book agents. A paper by Supt. J. L. Pickard, "What shall we Do with our Boys?" elicited considerable attention. The author gave a humorously scientific description of the boy, "as a member of the animal kingdom, sub-kingdom vertebrata, class mammalia; an animal, with a back-bone more or less flexible, and deriving support from his mother, often far into manhood; and having two hands, fitted for grasping, climbing, fighting, etc. He is endowed with a fickle disposition, permitting him to be good, bad, and indifferent in the same day; an ambition and desires to go and see as much as other boys; a faith, love, and sense of justice; a partisanship so intense as never to allow him to climb upon a fence until he grows older and begins to reason. Boy life must be studied, and individuality encouraged. Troublesome boys may be divided into two classes: those guilty of fault, and those guilty of crime. Crime includes fault, but fault does not necessarily include crime. Teachers must come down from their high horse, discard their dignity, keep their hearts young, and try to help the boys."

Also under the Elementary Department, a paper, "The Relation of the Teacher to the Reforms of the Day," was presented by Miss Frances Willard, formerly Dean of Northwestern University. Reform is gospel doctrine. Rum must be abolished and schools established. The issues of the hour, reforms of the day, and all questions agitating the public mind, must be explained to the children. The child is the text-book of the age, and, to establish reforms, we need his help as much as he needs ours. In reference to this paper, both ladies and gentlemen participated in a discussion, which, however, was not confined to the essayist s theme, but touched upon temperance, obscene literature, and the Bible in the public schools. Leon Trousdale, State Superintendent of Public Instruction in the State of Tennessee, read a paper on "Education at the South," which was followed by a very animated discussion.

The merits and demerits of country schools were considered, and much information was contributed by different speakers.

In the department of Higher Instruction, presided over by President Porter, several papers were presented, chief among which was the one by Professor Sawyer, entitled, "Comparative Orthoepy." Professors Sawyer, Shepard, and Hinkle were appointed a committee on Comparative Philology, to report at the next annual meeting, on the condition and prospects of Phonetic Science, co-operating as far as possible with a similar committee of the American Philological Association. Also, a lengthy address was delivered by W. W. Holwell, of the University of Minnesota, on "Agricultural and Polytechnic Institutions," arguing for the introduction of more practical branches of education in our college courses. "Full-orbed Education," by Dr. J. R. Buchanan, and "The Duties of Educators to Crime," by J. B. Bittinger, D. D., of Pennsylvania, were two very elaborate efforts. Lieutenant Schenck, U. S. A., of Iowa, presented an essay on "Military Science and Tactics in our Universities and Colleges," favoring compulsory military training in colleges, and arguing for its adoption in all institutions, the points of which being sustained, in the discussions which followed, by Dr. Read, Professor Rollins, Lieutenant Coleman, Professor Clapp, and Professor Sawyer, and as ably opposed by Professor Campbell, of the Minnesota State University.

In the general session, "Families, Past and Present," was the subject of an essay written by Lewis Felmeri, Professor of Pedagogics at Klausenburg University, Austria, in which the causes of the unhappiness of married life were pointed out, and the way in which the education of children is apt to be one-sided. A paper on "Caste in Education," by Professor A. P. Marble, of Massachusetts, claimed that schools should be free, but systematically governed, the same as a nation. The power of the State must be supreme. The folly of people who refuse to help educate their neighbors' children in the common schools was shown when their own are trained at individual expense. Universal taxation is the guiding star of the nation. No dividing line can be drawn, save that the pupil who evinces the most genius and talent should receive the most attention, not to the neglect of duller scholars, however. A very enter-

taining but highly idealistic essay, "The Relation of Art to Education," was read by Miss Grace C. Bibb, of St. Louis Normal School.

Dr. J. W. McJelton, of New York, Superintendents Gibbs of Florida, and White of Ohio, explained to the Association the workings of the National Bureau of Education, and offered the following resolution, which was adopted:

*Resolved*, That the good already accomplished by the National Bureau of Education is a complete vindication of the wisdom of its establishment, and we earnestly request Congress to increase the usefulness of the Bureau by providing more ample facilities for the prosecution of its important work.

During the afternoon of the second day, the entire convention was favored with an excursion to the poetical and famous Falls of Minnehaha.

In the evening session of the last day, speeches were made by representatives of the different States. Among the resolutions passed were the following, which are expressive of an opinion:

*Resolved*, That, since the public lands of the United States properly belong to the whole people, the proceeds of the sales or other distributions should be faithfully applied to their use and benefit, and in no case devoted to the use of corporations.

*Resolved*, In no way can the proceeds of these lands be so well or exclusively elevated to the general use or welfare of the people as by their appropriation to educational purposes.

The following are the officers elected: President, W. F. Phelps; Secretary, W. D. Hinkle; Treasurer, A. P. Marble; Vice President, D. B. Hagar, and thirty-two others.

This convention may be regarded as a success. The topics chosen were of practical interest, and, as a general thing, ably treated. The daily press, however, and the public generally, both east and west, have not given the usual prominence to this annual gathering of American educators—a result which can be accounted for only, perhaps, by the remoteness of the place of meeting, and by the fact that not the usual number of distinguished names graced the programme.

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### NEW YORK STATE TEACHERS' ASSOCIATION.

This Association, comprising most of the leading members of the profession throughout the State, assembled at the

Normal School Building, at Fredonia, July 27th, remaining in session three days, and terminating in a grand excursion to Lake Erie. The attendance was about the usual number, although the reverse had been prophesied since Chautauqua County is situated in the extreme south-western corner of the State, five hundred miles from the great metropolis. This difficulty, however, was obviated to some extent by the very liberal concessions secured in railroad fares. Addresses of welcome were delivered by the President of the village, and by Hon. Geo. Barker. The response and annual address of President H. R. Sandford was very timely and able. He dwelt upon the importance of this anniversary of this, the oldest kindred organization, with one exception, in the Union; for this year, according to the Jewish custom, it completes its majority, attaining its thirtieth year.

Music was furnished by Prof. E. L. Baker, of Buffalo, Prof. W. B. Hall, of Lancaster, Pa., and by a local quartette. Speeches were made and papers presented as follows: "County Associations and their Agency in the Advancement of Education," by Supt. Edward Danforth; "Social Relations of Teachers and Pupils," by Miss Elizabeth Richardson; "Education," by Prof. Wm. Wells, LL. D., of Union College; "The Relation of Principals to Boards of Education," by H. H. Hutton; "A Political Journalist's Views of It," by C. E. Bishop, Esq., Editor of the *Buffalo Express;* "The Physical and Metaphysical in Education," by Prof. F. B. Palmer, of Brockport; "Whom shall we License?" by Com. L. M. Robertson, of Chautauqua County; "What Next," by Prof. J. Tenney; "The Work of a Commissioner Preparatory for an Institute," by Com. F. A. Smith, of Angelica; "German Schools," by Dr. J. Dorman Steele, of Elmira; "Civilization in America," by Chancellor E. O. Haven, D. D., LL. D., of Syracuse University; "Promotion in Graded Schools," by J. G. Allen; "Religious Element in Education," by Prof. S. H. Albro; "What to Teach," by Supt. Wm. Harkness; "The Centennial in the Schools," by Prof. J. T. Edwards; "Industrial Drawing," by Mrs. Louise H. Crittendon; and "Test Examinations," by Dr. D. J. Pratt.

The closing session was unusually interesting. Dr. N. T. Clarke was elected President for the ensuing year. Local arrange-

ments for the convenience of members were uncommonly good. The only fault which can be found with the management of this meeting, and this is not the first State Convention similarly characterized, was the waste of so much time and attention in organizing and disbanding, getting thoroughly welcomed, securely installing the president, appointing committees, and telling people how and when to go home, and bidding farewell. For the first quarter of the session the great question of the hour seemed to be, How shall we get ready to do something? and, during the last quarter, Where shall we meet, who shall preside, and what shall we do next year? Our national Congress, which is to sit all winter, does not require so many organizing formalities.

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### NEW JERSEY STATE TEACHERS' ASSOCIATION.

The twenty-second annual meeting of the New Jersey State Teachers was held in the Normal Building, at Trenton, Aug. 24th and 25th. The usual words of welcome and responses formed the opening exercises. Prof. J. A. Lippincott, of Dickinson College, delivered an address entitled, "Method of Limits." Addresses were also delivered by Prof. J. W. Dickinson, of the Massachusetts Normal School; Rev. Alexander Shiras, D.D.; J. P. Wickersham, State Supt. of Schools of Pennsylvania; and Prof. F. D. March, of Lafayette College. Lectures were delivered by Dr. Hunt, of Metuchen, N. J., and by Miss Julia M. Thomas.

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## *THE DARWINIAN THEORY.*

IT is not generally known that a series of elaborate experiments intended to illustrate the laws affecting the variation and selection of species, have been for some years going on under the direction of able and intelligent naturalists. These experiments were begun soon after the appearance of Mr. Darwin's great work, and their object is to discover the extent to which, by persistent effort, species may be varied, to what degree particular organs may be changed by a different circumstance and condition, and how far feeble and rudimentary de-

velopment may be increased and accelerated by special conditions and wants. These experiments are carried out with the utmost care, and their results recorded with accuracy; and they will, no doubt, in due time, throw much light on the doctrines of development and natural selection. The period during which they have been conducted has as yet been too brief to yield important results, and they may possibly require to be carried on for more than half a century before their scientific value is really ascertained. These experiments are under the direct supervision of nearly all the more eminent naturalists of the day, including Sir John Lubbock, Mr. Darwin, and Mr. Wallace, and they will be the first sustained scientific test to which the laws affecting the variation and origin of the species have been subjected.—*Scottish Paper.*

## *THE LAST OF THE PENIKESE ISLAND SCHOOL.*

THE Anderson School of Natural History, located on Penikese Island, one of the Elizabeth group of sixteen in Buzzard's Bay, which was founded at the expense of so much exertion, money, and anxiety on the part of the late Professor Louis Agassiz and others, appears to be undergoing about the last mutation an institution of the kind is able to stand. It was the intention of the trustees to establish a permanent fund of $150,000 and run a steamer between the island and New Bedford daily, thus reducing the price of supplies at the island and greatly augmenting the attractiveness of the place. The death of the projector, however, was a death-blow to the prospects of the institution, which, indeed, has ceased to be an institution at all.

The existing trustees of the remains of the school—Alex. E. R. Agassiz, Martin Brimmer, Theodore Lyman, General John A. Dix, of New York, L. Taurtalles, and Professor Barnard, President of Columbia College—appear not to have been, of late, at least, kept well-posted respecting the financial condition of their trust, and much dissatisfaction is said to have resulted from a clear statement of facts by the treasurer. However

this may be, it appears that definite action has been taken upon the matter, and that all movable property connected with the concern is to be turned into cash under the hammer of a Boston auctioneer, for the benefit of creditors. An inventory has been taken for this purpose, and the property will be transported to this city by water and offered for sale within a fortnight. A small portion of the school paraphernalia, such as would not pay for moving, has been given to the school at Wood's Hole. The friends of the undertaking hope at some not-distant time to make a new effort in the same direction, with more encouraging results.—*Boston Journal.*

## *CURRENT PUBLICATIONS.*

A NOVEL edition of those enchanting stories "The Arabian Nights' Entertainments," has been issued by Howard Challen of Philadelphia. It is indeed a marvel of beauty as well as of cheapness. These five ten cent pamphlets cannot fail to popularize and bring within the reach of all, those well-known scenes. The original text has been somewhat amended so as to adapt it to school-children of both sexes. We think the changes are no detriment to the interest of the incidents, or to the plot of the several stories.

The first and great difficulty in learning the German language is with the spelling and pronunciation, and to this part of the task Prof. Schlegel devotes the first thirty pages of his new work.* The particular directions for pronunciation are immediately connected with the letters and words, they being very explicit, so as not to be misunderstood by the dullest learner. Sufficient space has been given to each sound of the language, and for this the book is to be commended. Since the most common parts of speech are freely interspersed in the introductory part, the learner is prepared to take up the second section—sentences—with valuable foreknowledge.

This section contains the simplest verbs and collocation of words, and from these, fully explained, the pupil is conducted

* "First German Book," by Prof. Ch. A. Schlegel. L. W. Schmidt, Publisher.

to the more difficult parts. The models in this section seem well adapted to acquaint the pupil with the most familiar forms of the language and present its most intricate parts in the simplest manner possible. The second part is made up of practical reading exercises and carefully prepared sections on irregular verbs and other parts of speech, and finally, the simplified rules for construction of sentences. The appended vocabulary is sufficiently complete. Unfortunately, the author has secured a by no means desirable dress for his little book, and thus one great difficulty in acquiring the language is unnecessarily aggravated.

If German and French are to be raised to a higher plane, and, by supplanting the languages of antiquity, become the classics of the future, no better means can be employed for hastening this result than by issuing new editions of the most distinguished works in those languages. This has been effected to some extent, we think, by a very handsome edition * of Schiller's Wallenstein. The introduction is sufficiently extensive, and the German type very good.

## *HAVE ANIMALS A SENSE OF HUMOR?*

A WRITER in *Nature*, George J. Romanes, brings together some instances tending to show the existence in some animals of a sense of humor. A young orang-outang in the London Zoological Gardens used frequently to amuse the spectators by inverting on her head her feeding-can, and the animal was evidently gratified when her conduct called forth a laugh. A Skye terrier belonging to Mr. Romanes, "while lying upon one side and violently grinning, would hold one leg in his mouth." The animal was much pleased whenever this "joke" was duly appreciated, but would become sulky if no notice was taken of it. This dog was fond of catching flies upon the window-panes; but if ridiculed when unsuccessful, he was evidently much annoyed. Having failed repeatedly on a certain occasion to catch a fly, he evidently became so dis-

*Schiller's Die Piccolomini, Edited by James M. Hart. G. P. Putnam's Sons, Publishers.

tressed that "he positively pretended to catch the fly, going through all the appropriate actions with lips and tongue, and afterward rubbing the ground with his neck as if to kill the victim. So well," continues Mr. Romanes, "was the whole process simulated that I should have been quite deceived had I not seen that the fly was still upon the window. Accordingly I drew his attention to this fact, as well as to the absence of anything upon the floor; and when he saw that his hypocrisy had been detected, he slunk away under some furniture, evidently very much ashamed of himself."—*From Popular Science Monthly for September.*

## *AN AGRICULTURAL COLLEGE.*

A VERY encouraging report of the Agricultural College at Blacksburg, Virginia, has been written by Miss Sarah Gould. The land grant of 300,000 acres, apportioned to Virginia by Congress, in 1862, yielded $285,000, of which this institution secured two-thirds. Although the buildings are still in process of erection the school is thoroughly organized. Three hundred and twenty-five acres of land belonging to the college are under cultivation by the students. A majority of the one hundred and seventy-five students mess together in clubs, and by raising, for the most part, their own provisions, reduce their board down to six dollars a month. Uniformed in a suit of gray, they are daily drilled in field evolutions, their arms being furnished by the State.

## *MISCELLANEA.*

THE Vanderbilt University buildings will be ready for occupancy by October 1st. The dedicatory address will be made by Rev. Chas. F. Deems, D.D., pastor of the Church of the Strangers, New York City.

OBITUARY.—The late Hon. Horace Binney, of Philadelphia, was the last survivor of the class of 1797 at Harvard. All the classes are now extinct as late as 1803. Mr. Binney survived

his commencement seventy-eight years—a time exceeded by only six of the graduates.

ANOTHER Massachusetts College President is "talked of," for Governor—President Chadbourne, of Williams.

A PUBLIC library has recently been established at Yeddo, Japan, for the use of both natives and foreigners.

"WHY should we celebrate Washington's birthday more than mine?" asked a teacher. "Because he never told a lie," shouted a little boy.

THE Commencement of the Maine State Agricultural College took place recently at Orono. Ex-Governor Washburne delivered an oration on the "Laws of Success."

AT nearly all the educational meetings this summer, resolutions have been passed, strongly favoring an educational representation at the Centennial.

KANSAS *Teacher:* "Where does all of our grain go to?" *Boy:* "It goes into the hopper." "What hopper?" "Grasshopper!" was the prompt response, and the lad was probably not far from right.

OBERLIN is one of the few institutions which keeps up the old fashion of August Commencements. One of the graduates this year was a negro. The necrology for the last year includes, among others, the Rev. John Todd, '43, and the Rev. Charles Livingstone, '45, brother of the celebrated traveler.

THE erection of buildings for the Hopkin's University at Baltimore, will be commenced within the next two years. The trustees of the bequest are commencing to carry out the wishes of the donor. Twenty-four acres of land have been purchased for the Colored Orphan Asylum. This building will be about three miles distant from the hospital, which is to be located in the eastern section of the city. The University proper is to be erected on what is called the Clifton Estate. President Gilman has been in Europe, gathering information to be of use in the establishment and development of the great school. He has been through England, Scotland, Ireland, and on the continent, conversing and corresponding with the learned, and examining the systems of education of the old world.

ESTIMATE your teaching not by what you tell your pupils, but by what they tell back to you.

A LITTLE girl, hearing her teacher spoken of as a painstaking woman, remarked that the scholars were the "painstakingest," for they were generally whipped all round every day.

A COUNTRYMAN in Savannah, observing a gang of negroes laboring on the streets, each wearing a chain and ball, asked one why the ball was chained to his leg. "To keep people from stealing it. Heap of thieves about here."

RECENTLY, two inkstands and a pen were dug up at Pompeii. The pen is of metal, and made almost similar in shape to our quill pens. So, in the writing line, the moderns are not so far ahead after all.

"DID you take the note, and did you see Mr. Thompson, Jack?" "Ees, sir." "And how was he?" "Why, he looked pretty well; but he's very blind." "Blind! what do you mean?" "Why, while I wur in the room he axed me where my hat wur, and I'm blessed if it wur not on my head all the while."

A PROMINENT architect says that now is the time of all others for men, having the means to build, to do such work, as it can be done now at fully twenty per cent. less than at this time last year. The prices of labor and materials are cheaper than they have been for years. Whoever contemplates taking this advice should read Gail Hamilton's article in the last *Independent*, on "School-Houses," and get the point of it, if he can.

ONE of the most discreditable relics of pedagogical barbarism is the practice of making children apologize to their teachers for some real or imaginary offence. It would seem as if the repugnance of the children to submit to this species of degradation, their awkwardness in going through the ridiculous form, and a general sense of unfitness, would long ere this have suggested to teachers the impropriety of the performance. If a child has self-possession enough to offer a voluntary apology, there is no objection to the ceremony; but an enforced apology from a child is humiliating to him, and embarrassing to a teacher of good taste.

THE Michigan Legislature has passed a bill abolishing county superintendents of schools, and providing for the restoration of town superintendents.

THE Legislature of California has passed a law forbidding the making of any difference in the salaries of teachers on account of sex. The salaries paid teachers of the same grade must be equal.

TALLEYRAND once complained that the English had thirty-nine religions and only one sauce, which evoked the retort from a witty Englishman, "and the French have thirty-nine sauces and no religion."

COMETS are mere masses of vapor. The comet of 1860 was acted upon so powerfully by the sun that it threw out a tail 90,000,000 of miles in length in four days. One comet has been seized upon by the planet Jupiter and appropriated entirely.

PROF. HARTT, of Cornell University, has received the appointment of National Geologist of Brazil, at a salary of $10,000 a year. Dr. Alexander Winchell, of Syracuse University, has accepted the chair of Geology in the Vanderbilt University, Tenn.

"PEOPLE are always talking of perseverance, and courage, and fortitude; but patience is the finest and worthiest part of fortitude, and the rarest, too. I have known twenty persevering girls to one patient one, but it is only the twenty-first one who can do her work, out and out, and enjoy it. For patience lies at the root of all pleasures as well as of all powers.—*Ruskin.*

IT is related of a certain minister, who was noted for his long sermons with many divisions, that one day, when he was advancing among his teens, he reached at length a kind of resting-place in his discourse, when, pausing to take breath, he asked the question, "And what shall I say more? A voice from the congregation earnestly responded, "Say 'Amen!'"

A BLOCK of granite, which is to serve as a monument to Professor Agassiz, has arrived in Cambridge, Massachusetts It was taken near the lower glacier of the Aar, in Switzerland where Professor Agassiz made explorations, and will be placed over his grave in Mount Auburn Cemetery, in the spring, without material alteration other than the cutting of an inscription.

MANY readers judge of the power of a book by the shock it gives their feelings, as some savage tribes determine the power of their muskets by their recoil; that being considered best which fairly prostrates the purchaser.

A SCIENTIFIC schoolboy demonstrated to his teacher that "heat generates motion," by slipping a piece of lighted punk into the teacher's chair. The demonstration was triumphant, and the motion generated by the heat was rather spontaneous.

*The West Virginia Educational Monthly* gives a gratifying statement of the progress of education in the South and West, several contributed articles, and editorial notes.

*The National School-master* published in London, is at hand. Its typographical and general appearance is in marked contrast with our own educational monthlies. Printed on coarse paper, without cover, and with little or no effort toward attractiveness, it makes a very shabby appearance by the side of our symmetrical and neatly printed and bound journals, and would indicate that, in the matter of mechanical execution at least, we are far ahead of our neighbors over the water. They seem to exercise a rather more strict espionage over their teachers than we have yet been able to do, as this journal gives an account of the revocation of the certificate of a schoolmaster recently, because he was badly in debt. We should like to know how he is to get out of debt, if his employment and consequent salary are taken from him?

## *PUBLISHERS' DEPARTMENT.*

**All interested in improved modes of Teaching Latin will do well to send their addresses to Box 3445, New York P. O.** A new and interesting pamphlet will be mailed on receipt of four cents to prepay postage.

**The Japanese Government** has sent to J. W. Schermerhorn & Co., of New York, the largest order for *School and Philosophical Apparatus* ever given by any Government or Institution. The order is being filled from Ritchie's famous establishment.

**Vanderbilt University** is being supplied with *the very best modern School Furniture.* The enterprising and far-sighted Bishop who has such matters in charge has selected styles similar to those used in *Cornell University*—and manufactured by the same house, J. W. Schermerhorn & Co.

It has been said that "the present age is unable to produce a good and satisfactory text-book on English Grammar." Prof. S. W. Whitney has just produced a neat little volume which refutes this quotation. It is receiving deservedly wide attention. See the advertisement.